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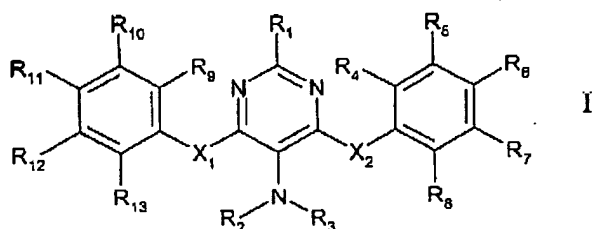
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LISTING OF CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application.

Claim 1. (Withdrawn) A method of controlling ectoparasites on a mammal comprising administering to said mammal a compound of formula I



wherein

R_1 is hydrogen, halogen, cyano, OH, SH, NO_2 , COOH , COOR_2 , CONH_2 , CONR_2R_3 , SO_3H , $\text{SO}_2\text{NR}_2\text{R}_3$, $\text{C}_1\text{-C}_6\text{-alkyl}$, halo- $\text{C}_1\text{-C}_6\text{-alkyl}$, $\text{C}_1\text{-C}_6\text{-alkoxy}$, halo- $\text{C}_1\text{-C}_6\text{-alkoxy}$, $\text{C}_2\text{-C}_6\text{-alkenyl}$, halo- $\text{C}_2\text{-C}_6\text{-alkenyl}$, $\text{C}_2\text{-C}_6\text{-alkinyl}$, $\text{C}_3\text{-C}_6\text{-cycloalkyl}$, halo- $\text{C}_3\text{-C}_6\text{-cycloalkyl}$, $\text{C}_3\text{-C}_6\text{-cycloalkyloxy}$, $\text{C}_3\text{-C}_6\text{-cycloalkylthio}$, $\text{C}_2\text{-C}_6\text{-alkenyloxy}$, halo- $\text{C}_2\text{-C}_6\text{-alkenyloxy}$, $\text{C}_1\text{-C}_6\text{-alkylthio}$, halo- $\text{C}_1\text{-C}_6\text{-alkylthio}$, $\text{C}_1\text{-C}_6\text{-alkylsulfonyloxy}$, halo- $\text{C}_1\text{-C}_6\text{-alkylsulfonyloxy}$, $\text{C}_1\text{-C}_6\text{-alkylsulfinyl}$, halo- $\text{C}_1\text{-C}_6\text{-alkylsulfinyl}$, $\text{C}_1\text{-C}_6\text{-alkylsulfonyl}$, halo- $\text{C}_1\text{-C}_6\text{-alkylsulfonyl}$, $\text{C}_2\text{-C}_6\text{-alkenylthio}$, halo- $\text{C}_2\text{-C}_6\text{-alkenylthio}$, $\text{C}_2\text{-C}_6\text{-alkenylsulfinyl}$, halo- $\text{C}_2\text{-C}_6\text{-alkenylsulfinyl}$, $\text{C}_2\text{-C}_6\text{-alkenylsulfonyl}$, halo- $\text{C}_2\text{-C}_6\text{-alkenylsulfonyl}$, NR_2R_3 , unsubstituted or one- to five-fold substituted aryl or unsubstituted or substituted hetaryl, the substituents selected from the group consisting of halogen, cyano, OH, SH, NO_2 , COOH , COOR_2 , CONH_2 , CONR_2R_3 , SO_3H , $\text{SO}_2\text{NR}_2\text{R}_3$, $\text{C}_1\text{-C}_6\text{-alkyl}$, halo- $\text{C}_1\text{-C}_6\text{-alkyl}$, $\text{C}_1\text{-C}_6\text{-alkoxy}$, halo- $\text{C}_1\text{-C}_6\text{-alkoxy}$, $\text{C}_2\text{-C}_6\text{-alkenyl}$, halo- $\text{C}_2\text{-C}_6\text{-alkenyl}$, $\text{C}_2\text{-C}_6\text{-alkinyl}$, $\text{C}_3\text{-C}_6\text{-cycloalkyl}$, halo- $\text{C}_3\text{-C}_6\text{-cycloalkyl}$, $\text{C}_3\text{-C}_6\text{-cycloalkyloxy}$, $\text{C}_3\text{-C}_6\text{-cycloalkylthio}$, $\text{C}_2\text{-C}_6\text{-alkenyloxy}$, halo- $\text{C}_2\text{-C}_6\text{-alkenyloxy}$, $\text{C}_1\text{-C}_6\text{-alkylthio}$, halo- $\text{C}_1\text{-C}_6\text{-alkylthio}$, $\text{C}_1\text{-C}_6\text{-alkylsulfonyloxy}$, halo- $\text{C}_1\text{-C}_6\text{-alkylsulfonyloxy}$, $\text{C}_1\text{-C}_6\text{-alkylsulfinyl}$, halo- $\text{C}_1\text{-C}_6\text{-alkylsulfinyl}$, $\text{C}_1\text{-C}_6\text{-alkylsulfonyl}$, halo- $\text{C}_1\text{-C}_6\text{-alkylsulfonyl}$, $\text{C}_2\text{-C}_6\text{-alkenylthio}$, halo- $\text{C}_2\text{-C}_6\text{-alkenylthio}$, $\text{C}_2\text{-C}_6\text{-alkenylsulfinyl}$, halo- $\text{C}_2\text{-C}_6\text{-alkenylsulfinyl}$, $\text{C}_2\text{-C}_6\text{-alkenylsulfonyl}$, halo- $\text{C}_2\text{-C}_6\text{-alkenylsulfonyl}$ and NR_2R_3 ;

R₂ and R₃, independently of one another, signify hydrogen, C₁-C₆-alkyl, halo-C₁-C₆-alkyl, formyl, C₁-C₆-alkylcarbonyl, halo-C₁-C₆-alkylcarbonyl, C₁-C₆-alkoxycarbonyl, halo-C₁-C₆-alkoxycarbonyl, C₁-C₆-alkylaminocarbonyl, di-C₁-C₆-alkylaminocarbonyl, or unsubstituted or one- to five-fold substituted benzyl, the substituents selected from the group consisting of halogen, cyano, OH, SH, NO₂, COOH, COOR₂, CONH₂, CONR₂R₃, SO₃H, SO₂NR₂R₃, C₁-C₆-alkyl, halo-C₁-C₆-alkyl, C₁-C₆-alkoxy, halo-C₁-C₆-alkoxy, C₂-C₆-alkenyl, halo-C₂-C₆-alkenyl, C₂-C₆-alkinyl, C₃-C₆-cycloalkyl, halo-C₃-C₆-cycloalkyl, C₃-C₆-cycloalkyloxy, C₃-C₆-cycloalkylthio, C₂-C₆-alkenyloxy, halo-C₂-C₆-alkenyloxy, C₁-C₆-alkylthio, halo-C₁-C₆-alkylthio, C₁-C₆-alkylsulfonyloxy, halo-C₁-C₆-alkylsulfonyloxy, C₁-C₆-alkylsulfinyl, halo-C₁-C₆-alkylsulfinyl, C₁-C₆-alkylsulfonyl, halo-C₁-C₆-alkylsulfonyl, C₂-C₆-alkenylthio, halo-C₂-C₆-alkenylthio, C₂-C₆-alkenylsulfinyl, halo-C₂-C₆-alkenylsulfinyl, C₂-C₆-alkenylsulfonyl and halo-C₂-C₆-alkenylsulfonyl;

R₄, R₅, R₆, R₇, R₈, R₉, R₁₀, R₁₁, R₁₂ and R₁₃, independently of one another, are hydrogen, halogen, cyano, nitro, OH, SH, NO₂, COOH, COOR₂, CONH₂, CONR₂R₃, SO₃H, SO₂NR₂R₃, C₁-C₆-alkyl, halo-C₁-C₆-alkyl, C₁-C₆-alkoxy, halo-C₁-C₆-alkoxy, C₂-C₆-alkenyl, halo-C₂-C₆-alkenyl, C₂-C₆-alkinyl, C₃-C₆-cycloalkyl, C₂-C₆-alkenyloxy, halo-C₂-C₆-alkenyloxy, C₁-C₆-alkylthio, halo-C₁-C₆-alkylthio, C₁-C₆-alkylsulfonyloxy, halo-C₁-C₆-alkylsulfonyloxy, C₁-C₆-alkylsulfinyl, halo-C₁-C₆-alkylsulfinyl, C₁-C₆-alkylsulfonyl, halo-C₁-C₆-alkylsulfonyl, C₂-C₆-alkenylthio, halo-C₂-C₆-alkenylthio, C₂-C₆-alkenylsulfinyl, halo-C₂-C₆-alkenylsulfinyl, C₂-C₆-alkenylsulfonyl, halo-C₂-C₆-alkenylsulfonyl, C₁-C₆-alkylamino, di-C₁-C₆-alkylamino, C₁-C₆-alkylsulfonylamino, halo-C₁-C₆-alkylsulfonylamino, C₁-C₆-alkylcarbonyl, halo-C₁-C₆-alkylcarbonyl, C₁-C₆-alkoxycarbonyl, C₁-C₆-alkylaminocarbonyl, di-C₁-C₆-alkylaminocarbonyl, or unsubstituted or one- to five-fold substituted aryl or unsubstituted or substituted hetaryl, the substituents selected from the group consisting of halogen, cyano, OH, SH, NO₂, COOH, COOR₂, CONH₂, CONR₂R₃, SO₃H, SO₂NR₂R₃, C₁-C₆-alkyl, halo-C₁-C₆-alkyl, C₁-C₆-alkoxy, halo-C₁-C₆-alkoxy, C₂-C₆-alkenyl, halo-C₂-C₆-alkenyl, C₂-C₆-alkinyl, C₃-C₆-cycloalkyl, halo-C₃-C₆-cycloalkyl, C₃-C₆-cycloalkyloxy, C₃-C₆-cycloalkylthio, C₂-C₆-alkenyloxy, halo-C₂-C₆-alkenyloxy, C₁-C₆-alkylthio, halo-C₁-C₆-alkylthio, C₁-C₆-alkylsulfonyloxy, halo-C₁-C₆-alkylsulfonyloxy, C₁-C₆-alkylsulfinyl, halo-C₁-C₆-alkylsulfinyl, C₁-C₆-alkylsulfonyl, halo-C₁-C₆-alkylsulfonyl,

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alkylsulfonyl, C₂-C₆-alkenylthio, halo-C₂-C₆-alkenylthio, C₂-C₆-alkenylsulfinyl, halo-C₂-C₆-alkenylsulfinyl, C₂-C₆-alkenylsulfonyl, halo-C₂-C₆-alkenylsulfonyl and NR₂R₃;

X₁ and X₂, independently of one another, are C(R₁₄)(R₁₅), NR₁₄, O, S, SO or SO₂; and

R₁₄ and R₁₅, independently of one another, signify hydrogen, C₁-C₆-alkyl, formyl, C₁-C₆-alkylcarbonyl or halo-C₁-C₆-alkylcarbonyl.

Claim 2. (Withdrawn) The method of claim 1, wherein

R₁ is hydrogen, halogen, NO₂, C₁-C₆-alkyl, halo-C₁-C₆-alkyl, C₁-C₆-alkoxy, halo-C₁-C₆-alkoxy, C₃-C₆-cycloalkyl, halo-C₃-C₆-cycloalkyl, C₃-C₆-cycloalkyloxy, C₃-C₆-cycloalkylthio, C₁-C₆-alkylthio or halo-C₁-C₆-alkylthio.

Claim 3. (Withdrawn) The method of claim 1, wherein

R₁ is hydrogen, halogen, NO₂, C₁-C₆-alkyl, halo-C₁-C₆-alkyl, C₁-C₆-alkoxy or halo-C₁-C₆-alkoxy.

Claim 4. (Withdrawn) The method of claim 1, wherein

R₁ is hydrogen, C₁-C₆-alkyl or C₁-C₆-alkoxy.

Claim 5. (Withdrawn) The method of claim 1, wherein

R₂ and R₃, independently of one another, signify hydrogen, C₁-C₆-alkyl, formyl, C₁-C₆-alkylcarbonyl, C₁-C₆-alkoxycarbonyl, C₁-C₆-alkylaminocarbonyl, di-C₁-C₆-alkylaminocarbonyl or unsubstituted or one- to five-fold substituted benzyl, the substituents selected from the group consisting of halogen, cyano, OH, SH, NO₂, COOH, COOR₂, CONH₂, CONR₂R₃, SO₃H, SO₂NR₂R₃, C₁-C₆-alkyl, halo-C₁-C₆-alkyl, C₁-C₆-alkoxy, halo-C₁-C₆-alkoxy, C₂-C₆-alkenyl, halo-C₂-C₆-alkenyl, C₂-C₆-alkinyl, C₃-C₆-cycloalkyl, halo-C₃-C₆-cycloalkyl, C₃-C₆-cycloalkyloxy, C₃-C₆-cycloalkylthio, C₂-C₆-alkenyloxy, halo-C₂-C₆-alkenyloxy, C₁-C₆-alkylthio, halo-C₁-C₆-alkylthio, C₁-C₆-alkylsulfonyloxy, halo-C₁-C₆-alkylsulfonyloxy, C₁-C₆-alkylsulfinyl, halo-C₁-C₆-alkylsulfinyl, C₁-C₆-alkylsulfonyl, halo-C₁-C₆-alkylsulfonyl, C₂-C₆-alkenylthio, halo-C₂-C₆-alkenylthio, C₂-C₆-alkenylsulfinyl, halo-C₂-C₆-alkenylsulfinyl, C₂-C₆-alkenylsulfonyl and halo-C₂-C₆-alkenylsulfonyl.

Claim 6. (Withdrawn) The method of claim 1, wherein

R₂ and R₃, independently of one another, signify hydrogen, C₁-C₄-alkyl, formyl, C₁-C₄-alkylcarbonyl or benzyl.

Claim 7. (Withdrawn) The method of claim 1, wherein

R₂ and R₃, independently of one another, signify hydrogen, C₁-C₂-alkyl, benzyl or formyl.

Claim 8. (Withdrawn) The method of claim 1, wherein

R₄, R₅, R₆, R₇, R₈, R₉, R₁₀, R₁₁, R₁₂ and R₁₃, independently of one another, are hydrogen, halogen, cyano, nitro, C₁-C₆-alkyl, halo-C₁-C₆-alkyl, C₁-C₆-alkoxy, halo-C₁-C₆-alkoxy, C₃-C₆-cycloalkyl, C₁-C₆-alkylthio, halo-C₁-C₆-alkylthio or unsubstituted or one to five-fold substituted aryl or unsubstituted or substituted hetaryl, the substituents selected from the group consisting of halogen, cyano, OH, SH, NO₂, COOH, COOR₂, CONH₂, CONR₂R₃, SO₂H, SO₂NR₂R₃, C₁-C₆-alkyl, halo-C₁-C₆-alkyl, C₁-C₆-alkoxy, halo-C₁-C₆-alkoxy, C₂-C₆-alkenyl, halo-C₂-C₆-alkenyl, C₂-C₆-alkinyl, C₃-C₆-cycloalkyl, halo-C₃-C₆-cycloalkyl, C₃-C₆-cycloalkyloxy, C₃-C₆-cycloalkylthio, C₂-C₆-alkenyloxy, halo-C₂-C₆-alkenyloxy, C₁-C₆-alkylthio, halo-C₁-C₆-alkylthio, C₁-C₆-alkylsulfonyloxy, halo-C₁-C₆-alkylsulfonyloxy, C₁-C₆-alkylsulfinyl, halo-C₁-C₆-alkylsulfinyl, C₁-C₆-alkylsulfonyl, halo-C₁-C₆-alkylsulfonyl, C₂-C₆-alkenylthio, halo-C₂-C₆-alkenylthio, C₂-C₆-alkenylsulfinyl, halo-C₂-C₆-alkenylsulfinyl, C₂-C₆-alkenylsulfonyl, halo-C₂-C₆-alkenylsulfonyl and NR₂R₃.

Claim 9. (Withdrawn) The method of claim 1, wherein

R₄, R₅, R₆, R₇, R₈, R₉, R₁₀, R₁₁, R₁₂ and R₁₃, independently of one another, are hydrogen, halogen, nitro, C₁-C₄-alkyl, halo-C₁-C₄-alkyl, C₁-C₄-alkoxy or halo-C₁-C₄-alkoxy.

Claim 10. (Withdrawn) The method of claim 1, wherein

R₄, R₅, R₆, R₇, R₈, R₉, R₁₀, R₁₁, R₁₂ and R₁₃, independently of one another, are hydrogen, halogen, nitro, C₁-C₂-alkyl or halo-C₁-C₂-alkyl.

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Claim 11. (Withdrawn) The method of-claim 1, wherein

R₄, R₅, R₆, R₇, R₈, R₉, R₁₀, R₁₁, R₁₂ and R₁₃, independently of one another, are hydrogen, halogen, nitro or CF₃.

Claim 12. (Withdrawn) The method of claim 1, wherein

X₁ and X₂, independently of one another, are NR₁₄, O or S.

Claim 13. (Withdrawn) The method of claim 1, wherein

X₁ and X₂, independently of one another, are NH, O or S.

Claim 14. (Withdrawn) The method of claim 1, wherein

X₁ and X₂ are O.

Claim 15. (Withdrawn) The method of claim 1, wherein

R₁₄ and R₁₅, independently of one another, signify hydrogen, C₁-C₄-alkyl, formyl, C₁-C₄-alkylcarbonyl.

Claim 16. (Withdrawn) The method of claim 1, wherein

R₁₄ and R₁₅, independently of one another, signify hydrogen or C₁-C₄-alkyl.

Claim 17. (Withdrawn) The method of claim 1, wherein

R₁₄ and R₁₅ signify hydrogen.

Claim 18. (Withdrawn) The method of

claim 1, wherein

R₁ is hydrogen, halogen, NO₂, C₁-C₆-alkyl, halo-C₁-C₆-alkyl, C₁-C₆-alkoxy, halo-C₁-C₆-alkoxy, C₃-C₆-cycloalkyl, halo-C₃-C₆-cycloalkyl, C₃-C₆-cycloalkyloxy, C₃-C₆-cycloalkylthio, C₁-C₆-alkylthio or halo-C₁-C₆-alkylthio;

R₂ and R₃, independently of one another, signify hydrogen, C₁-C₆-alkyl, formyl, C₁-C₆-alkylcarbonyl, C₁-C₆-alkoxycarbonyl, C₁-C₆-alkylaminocarbonyl, di-C₁-C₆-alkylaminocarbonyl or benzyl;

R₄, R₅, R₆, R₇, R₈, R₉, R₁₀, R₁₁, R₁₂ and R₁₃, independently of one another, are hydrogen, halogen, cyano, nitro, C₁-C₆-alkyl, halo-C₁-C₆-alkyl, C₁-C₆-alkoxy, halo-C₁-C₆-alkoxy, C₃-C₆-cycloalkyl, C₁-C₆-alkylthio, halo-C₁-C₆-alkylthio or unsubstituted or one- to five-fold substituted aryl or unsubstituted or substituted hetaryl, the substituents selected from the group consisting of halogen, cyano, OH, SH, NO₂, COOH, COOR₂, CONH₂, CONR₂R₃, SO₃H, SO₂NR₂R₃, C₁-C₆-alkyl, halo-C₁-C₆-alkyl, C₁-C₆-alkoxy, halo-C₁-C₆-alkoxy, C₂-C₆-alkenyl, halo-C₂-C₆-alkenyl, C₂-C₆-alkinyl, C₃-C₆-cycloalkyl, halo-C₃-C₆-cycloalkyl, C₃-C₆-cycloalkyloxy, C₃-C₆-cycloalkylthio, C₂-C₆-alkenyloxy, halo-C₂-C₆-alkenyloxy, C₁-C₆-alkylthio, halo-C₁-C₆-alkylthio, C₁-C₆-alkylsulfonyloxy, halo-C₁-C₆-alkylsulfonyloxy, C₁-C₆-alkylsulfinyl, halo-C₁-C₆-alkylsulfinyl, C₁-C₆-alkylsulfonyl, halo-C₁-C₆-alkylsulfonyl, C₂-C₆-alkenylthio, halo-C₂-C₆-alkenylthio, C₂-C₆-alkenylsulfinyl, halo-C₂-C₆-alkenylsulfinyl, C₂-C₆-alkenylsulfonyl, halo-C₂-C₆-alkenylsulfonyl and NR₂R₃;

X₁ and X₂, independently of one another, are NR₁₄, O or S; and
R₁₄ signifies hydrogen, C₁-C₄-alkyl, formyl, C₁-C₄-alkylcarbonyl.

Claim 19. (Withdrawn) The method of claim 1, wherein

R₁ is hydrogen, halogen, NO₂, C₁-C₆-alkyl, halo-C₁-C₆-alkyl, C₁-C₆-alkoxy or halo-C₁-C₆-alkoxy;

R₂ and R₃, independently of one another, signify hydrogen, C₁-C₄-alkyl, formyl, C₁-C₄-alkylcarbonyl or benzyl;

R₄, R₅, R₆, R₇, R₈, R₉, R₁₀, R₁₁, R₁₂ and R₁₃, independently of one another, are hydrogen, halogen, nitro, C₁-C₄-alkyl, halo-C₁-C₄-alkyl, C₁-C₄-alkoxy or halo-C₁-C₄-alkoxy; and

X₁ and X₂, independently of one another, are NH, O or S.

Claim 20. (Withdrawn) The method of claim 1, wherein

R₁ is hydrogen, C₁-C₆-alkyl or C₁-C₆-alkoxy;

R₂ and R₃, independently of one another, signify hydrogen, C₁-C₂-alkyl, formyl or benzyl;

$R_4, R_5, R_6, R_7, R_8, R_9, R_{10}, R_{11}, R_{12}$ and R_{13} , independently of one another, are hydrogen, halogen, nitro, C_1 - C_2 -alkyl or halo- C_1 - C_2 -alkyl; and
 X_1 and X_2 are O.

Claim 21. (Withdrawn) The method of claim 1, wherein

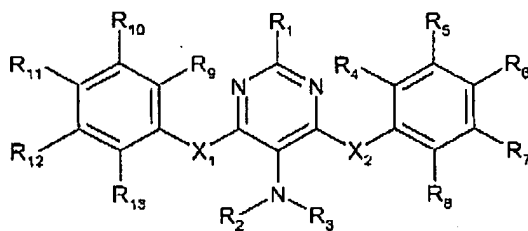
R_1 is hydrogen, C_1 - C_6 -alkyl or C_1 - C_6 -alkoxy;

R_2 and R_3 , independently of one another, signify hydrogen, C_1 - C_2 -alkyl, formyl or benzyl;

$R_4, R_5, R_6, R_7, R_8, R_9, R_{10}, R_{11}, R_{12}$ and R_{13} , independently of one another, are hydrogen, halogen, nitro or CF_3 ; and

X_1 and X_2 are O.

Claim 22. (Previously presented) An ectoparasiticial composition comprising a compound of formula I



wherein

R_1 is hydrogen, halogen, cyano, OH, SH, NO_2 , $COOH$, $COOR_2$, $CONH_2$, $CONR_2R_3$, SO_3H , $SO_2NR_2R_3$, C_1 - C_6 -alkyl, halo- C_1 - C_6 -alkyl, C_1 - C_6 -alkoxy, halo- C_1 - C_6 -alkoxy, C_2 - C_6 -alkenyl, halo- C_2 - C_6 -alkenyl, C_2 - C_6 -alkinyl, C_3 - C_6 -cycloalkyl, halo- C_3 - C_6 -cycloalkyl, C_3 - C_6 -cycloalkyloxy, C_3 - C_6 -cycloalkylthio, C_2 - C_6 -alkenyloxy, halo- C_2 - C_6 -alkenyloxy, C_1 - C_6 -alkylthio, halo- C_1 - C_6 -alkylthio, C_1 - C_6 -alkylsulfonyloxy, halo- C_1 - C_6 -alkylsulfonyloxy, C_1 - C_6 -alkylsulfinyl, halo- C_1 - C_6 -alkylsulfinyl, C_1 - C_6 -alkylsulfonyl, halo- C_1 - C_6 -alkylsulfonyl, C_2 - C_6 -alkenylthio, halo- C_2 - C_6 -alkenylthio, C_2 - C_6 -alkenylsulfinyl, halo- C_2 - C_6 -alkenylsulfinyl, C_2 - C_6 -alkenylsulfonyl, halo- C_2 - C_6 -alkenylsulfonyl, NR_2R_3 , unsubstituted or one- to five-fold substituted aryl or unsubstituted or substituted hetaryl, the substituents selected from the group consisting of halogen, cyano, OH, SH, NO_2 , $COOH$, $COOR_2$, $CONH_2$, $CONR_2R_3$, SO_3H , $SO_2NR_2R_3$, C_1 - C_6 -alkyl, halo- C_1 - C_6 -alkyl, C_1 - C_6 -alkoxy, halo- C_1 - C_6 -alkoxy, C_2 - C_6 -alkenyl, halo- C_2 - C_6 -alkenyl, C_2 - C_6 -alkinyl, C_3 -

C₆-cycloalkyl, halo-C₃-C₆-cycloalkyl, C₃-C₆-cycloalkyloxy, C₃-C₆-cycloalkylthio, C₂-C₆-alkenyloxy, halo-C₂-C₆-alkenyloxy, C₁-C₆-alkylthio, halo-C₁-C₆-alkylthio, C₁-C₆-alkylsulfonyloxy, halo-C₁-C₆-alkylsulfonyloxy, C₁-C₆-alkylsulfinyl, halo-C₁-C₆-alkylsulfinyl, C₁-C₆-alkylsulfonyl, halo-C₁-C₆-alkylsulfonyl, C₂-C₆-alkenylthio, halo-C₂-C₆-alkenylthio, C₂-C₆-alkenylsulfinyl, halo-C₂-C₆-alkenylsulfinyl, C₂-C₆-alkenylsulfonyl, halo-C₂-C₆-alkenylsulfonyl and NR₂R₃;

R₂ and R₃, independently of one another, signify hydrogen, C₁-C₆-alkyl, halo-C₁-C₆-alkyl, formyl, C₁-C₆-alkylcarbonyl, halo-C₁-C₆-alkylcarbonyl, C₁-C₆-alkoxycarbonyl, halo-C₁-C₆-alkoxycarbonyl, C₁-C₆-alkylaminocarbonyl, di-C₁-C₆-alkylaminocarbonyl or unsubstituted or one- to five-fold substituted benzyl, the substituents selected from the group consisting of halogen, cyano, OH, SH, NO₂, COOH, COOR₂, CONH₂, CONR₂R₃, SO₃H, SO₂NR₂R₃, C₁-C₆-alkyl, halo-C₁-C₆-alkyl, C₁-C₆-alkoxy, halo-C₁-C₆-alkoxy, C₂-C₆-alkenyl, halo-C₂-C₆-alkenyl, C₂-C₆-alkinyl, C₃-C₆-cycloalkyl, halo-C₃-C₆-cycloalkyl, C₃-C₆-cycloalkyloxy, C₃-C₆-cycloalkylthio, C₂-C₆-alkenyloxy, halo-C₂-C₆-alkenyloxy, C₁-C₆-alkylthio, halo-C₁-C₆-alkylthio, C₁-C₆-alkylsulfonyloxy, halo-C₁-C₆-alkylsulfonyloxy, C₁-C₆-alkylsulfinyl, halo-C₁-C₆-alkylsulfinyl, C₁-C₆-alkylsulfonyl, halo-C₁-C₆-alkylsulfonyl, C₂-C₆-alkenylthio, halo-C₂-C₆-alkenylthio, C₂-C₆-alkenylsulfinyl, halo-C₂-C₆-alkenylsulfinyl, C₂-C₆-alkenylsulfonyl and halo-C₂-C₆-alkenylsulfonyl;

R₄, R₅, R₆, R₇, R₈, R₉, R₁₀, R₁₁, R₁₂ and R₁₃, independently of one another, are hydrogen, halogen, cyano, nitro, OH, SH, NO₂, COOH, COOR₂, CONH₂, CONR₂R₃, SO₃H, SO₂NR₂R₃, C₁-C₆-alkyl, halo-C₁-C₆-alkyl, C₁-C₆-alkoxy, halo-C₁-C₆-alkoxy, C₂-C₆-alkenyl, halo-C₂-C₆-alkenyl, C₂-C₆-alkinyl, C₃-C₆-cycloalkyl, C₂-C₆-alkenyloxy, halo-C₂-C₆-alkenyloxy, C₁-C₆-alkylthio, halo-C₁-C₆-alkylthio, C₁-C₆-alkylsulfonyloxy, halo-C₁-C₆-alkylsulfonyloxy, C₁-C₆-alkylsulfinyl, halo-C₁-C₆-alkylsulfinyl, C₁-C₆-alkylsulfonyl, halo-C₁-C₆-alkylsulfonyl, C₂-C₆-alkenylthio, halo-C₂-C₆-alkenylthio, C₂-C₆-alkenylsulfinyl, halo-C₂-C₆-alkenylsulfinyl, C₂-C₆-alkenylsulfonyl, halo-C₂-C₆-alkenylsulfonyl, C₁-C₆-alkylamino, di-C₁-C₆-alkylamino, C₁-C₆-alkylsulfonylamino, halo-C₁-C₆-alkylsulfonylamino, C₁-C₆-alkylcarbonyl, halo-C₁-C₆-alkylcarbonyl, C₁-C₆-alkoxycarbonyl, C₁-C₆-alkylaminocarbonyl, di-C₁-C₆-alkylaminocarbonyl, or unsubstituted or one- to five-fold substituted aryl or unsubstituted or substituted hetaryl, the substituents selected from the group consisting of halogen, cyano, OH, SH, NO₂, COOH,

COOR₂, CONH₂, CONR₂R₃, SO₃H, SO₂NR₂R₃, C₁-C₆-alkyl, halo-C₁-C₆-alkyl, C₁-C₆-alkoxy, halo-C₁-C₆-alkoxy, C₂-C₆-alkenyl, halo-C₂-C₆-alkenyl, C₂-C₆-alkinyl, C₂-C₆-cycloalkyl, halo-C₃-C₆-cycloalkyl, C₃-C₆-cycloalkyloxy, C₃-C₆-cycloalkylthio, C₂-C₆-alkenyloxy, halo-C₂-C₆-alkenyloxy, C₁-C₆-alkylthio, halo-C₁-C₆-alkylthio, C₁-C₆-alkylsulfonyloxy, halo-C₁-C₆-alkylsulfonyloxy, C₁-C₆-alkylsulfinyl, halo-C₁-C₆-alkylsulfinyl, C₁-C₆-alkylsulfonyl, halo-C₁-C₆-alkylsulfonyl, C₂-C₆-alkenylthio, halo-C₂-C₆-alkenylthio, C₂-C₆-alkenylsulfinyl, halo-C₂-C₆-alkenylsulfinyl, C₂-C₆-alkenylsulfonyl, halo-C₂-C₆-alkenylsulfonyl and NR₂R₃;

X₁ and X₂, independently of one another, are C(R₁₄)(R₁₅), NR₁₄, O, S, SO or SO₂; and

R₁₄ and R₁₅, independently of one another, signify hydrogen, C₁-C₆-alkyl, formyl, C₁-C₆-alkylcarbonyl or halo-C₁-C₆-alkylcarbonyl;

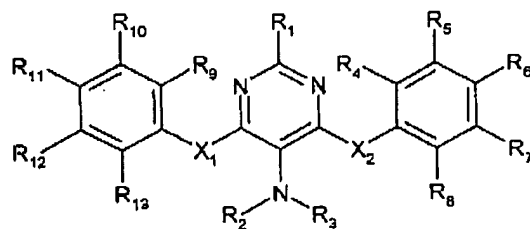
and at least one of a physiologically acceptable carrier or dispersant.

Claim 23. (Previously presented) The ectoparasiticide composition according to claim 22 wherein said composition is in a pour-on or spot-on formulation.

Claim 24. (Withdrawn) A method of controlling ectoparasites comprising administering an effective amount of at least one compound of formula I according to claim 1 to the habitat of the parasites.

Claims 25-26. (Cancelled)

Claim 27. (Previously presented) An ectoparasiticide composition comprising a compound of formula I



wherein R_1 is hydrogen, halogen, NO_2 , $\text{C}_1\text{-C}_6\text{-alkyl}$, halo- $\text{C}_1\text{-C}_6\text{-alkyl}$, $\text{C}_1\text{-C}_6\text{-alkoxy}$, halo- $\text{C}_1\text{-C}_6\text{-alkoxy}$, $\text{C}_3\text{-C}_6\text{-cycloalkyl}$, halo- $\text{C}_3\text{-C}_6\text{-cycloalkyl}$, $\text{C}_3\text{-C}_6\text{-cycloalkyloxy}$, $\text{C}_3\text{-C}_6\text{-cycloalkylthio}$, $\text{C}_1\text{-C}_6\text{-alkylthio}$ or halo- $\text{C}_1\text{-C}_6\text{-alkylthio}$;

R_2 and R_3 , independently of one another, signify hydrogen, $\text{C}_1\text{-C}_6\text{-alkyl}$, formyl, $\text{C}_1\text{-C}_6\text{-alkylcarbonyl}$, $\text{C}_1\text{-C}_6\text{-alkoxycarbonyl}$, $\text{C}_1\text{-C}_6\text{-alkylaminocarbonyl}$, di- $\text{C}_1\text{-C}_6\text{-alkylaminocarbonyl}$ or benzyl;

R_4 , R_5 , R_6 , R_7 , R_8 , R_9 , R_{10} , R_{11} , R_{12} and R_{13} , independently of one another, are hydrogen, halogen, cyano, nitro, $\text{C}_1\text{-C}_6\text{-alkyl}$, halo- $\text{C}_1\text{-C}_6\text{-alkyl}$, $\text{C}_1\text{-C}_6\text{-alkoxy}$, halo- $\text{C}_1\text{-C}_6\text{-alkoxy}$, $\text{C}_3\text{-C}_6\text{-cycloalkyl}$, $\text{C}_1\text{-C}_6\text{-alkylthio}$, halo- $\text{C}_1\text{-C}_6\text{-alkylthio}$ or unsubstituted or one- to five-fold substituted aryl or unsubstituted or substituted hetaryl, the substituents selected from the group consisting of halogen, cyano, OH, SH, NO_2 , COOH, COOR_2 , CONH_2 , CONR_2R_3 , SO_2H , $\text{SO}_2\text{NR}_2\text{R}_3$, $\text{C}_1\text{-C}_6\text{-alkyl}$, halo- $\text{C}_1\text{-C}_6\text{-alkyl}$, $\text{C}_1\text{-C}_6\text{-alkoxy}$, halo- $\text{C}_1\text{-C}_6\text{-alkoxy}$, $\text{C}_2\text{-C}_6\text{-alkenyl}$, halo- $\text{C}_2\text{-C}_6\text{-alkenyl}$, $\text{C}_2\text{-C}_6\text{-alkinyl}$, $\text{C}_3\text{-C}_6\text{-cycloalkyl}$, halo- $\text{C}_3\text{-C}_6\text{-cycloalkyl}$, $\text{C}_3\text{-C}_6\text{-cycloalkyloxy}$, $\text{C}_3\text{-C}_6\text{-cycloalkylthio}$, $\text{C}_2\text{-C}_6\text{-alkenyloxy}$, halo- $\text{C}_2\text{-C}_6\text{-alkenyloxy}$, $\text{C}_1\text{-C}_6\text{-alkylthio}$, halo- $\text{C}_1\text{-C}_6\text{-alkylthio}$, $\text{C}_1\text{-C}_6\text{-alkylsulfonyloxy}$, halo- $\text{C}_1\text{-C}_6\text{-alkylsulfonyloxy}$, $\text{C}_1\text{-C}_6\text{-alkylsulfinyl}$, halo- $\text{C}_1\text{-C}_6\text{-alkylsulfinyl}$, $\text{C}_1\text{-C}_6\text{-alkylsulfonyl}$, halo- $\text{C}_1\text{-C}_6\text{-alkylsulfonyl}$, $\text{C}_2\text{-C}_6\text{-alkenylthio}$, halo- $\text{C}_2\text{-C}_6\text{-alkenylthio}$, $\text{C}_2\text{-C}_6\text{-alkenylsulfinyl}$, halo- $\text{C}_2\text{-C}_6\text{-alkenylsulfinyl}$, $\text{C}_2\text{-C}_6\text{-alkenylsulfonyl}$, halo- $\text{C}_2\text{-C}_6\text{-alkenylsulfonyl}$ and NR_2R_3 ;

X_1 and X_2 , independently of one another, are NR_{14} , O or S;

R_{14} signifies hydrogen, $\text{C}_1\text{-C}_4\text{-alkyl}$, formyl, $\text{C}_1\text{-C}_4\text{-alkylcarbonyl}$; and at least one of a physiologically acceptable carrier or dispersant.

Claim 28. (Previously presented) The composition of claim 27, wherein

R_1 is hydrogen, halogen, NO_2 , $\text{C}_1\text{-C}_6\text{-alkyl}$, halo- $\text{C}_1\text{-C}_6\text{-alkyl}$, $\text{C}_1\text{-C}_6\text{-alkoxy}$ or halo- $\text{C}_1\text{-C}_6\text{-alkoxy}$;

R_2 and R_3 , independently of one another, signify hydrogen, $\text{C}_1\text{-C}_4\text{-alkyl}$, formyl, $\text{C}_1\text{-C}_4\text{-alkylcarbonyl}$ or benzyl;

R_4 , R_5 , R_6 , R_7 , R_8 , R_9 , R_{10} , R_{11} , R_{12} and R_{13} , independently of one another, are hydrogen, halogen, nitro, $\text{C}_1\text{-C}_4\text{-alkyl}$, halo- $\text{C}_1\text{-C}_4\text{-alkyl}$, $\text{C}_1\text{-C}_4\text{-alkoxy}$ or halo- $\text{C}_1\text{-C}_4\text{-alkoxy}$; and

X_1 and X_2 , independently of one another, are NH, O or S.

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Claim 29. (Previously presented) The composition of claim 27, wherein
R₁ is hydrogen, C₁-C₆-alkyl or C₁-C₆-alkoxy;
R₂ and R₃, independently of one another, signify hydrogen, C₁-C₂-alkyl, formyl or benzyl;
R₄, R₅, R₆, R₇, R₈, R₉, R₁₀, R₁₁, R₁₂ and R₁₃, independently of one another, are hydrogen,
halogen, nitro, C₁-C₂-alkyl or halo-C₁-C₂-alkyl; and
X₁ and X₂ are O.

Claim 30. (Previously presented) The composition of claim 27, wherein
R₁ is hydrogen, C₁-C₆-alkyl or C₁-C₆-alkoxy;
R₂ and R₃, independently of one another, signify hydrogen, C₁-C₂-alkyl, formyl or benzyl;
R₄, R₅, R₆, R₇, R₈, R₉, R₁₀, R₁₁, R₁₂ and R₁₃, independently of one another, are hydrogen,
halogen, nitro or CF₃; and
X₁ and X₂ are O.

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